

ABSTRACT OF THE DISCLOSURE

A distributed address database management technique involves maintaining an
5 address database by each of a number of interconnected modules. Each module maintains a
number of locally owned address entries and a number of remotely owned address entries in
the address database. Each module monitors the status of its locally owned address entries,
maintains the locally owned address entries based upon the status, and provides the status to
the other interconnected modules. Each module maintains the remotely owned address
10 entries based upon the status received from the other interconnected modules. When a
module adds a locally owned address entry to its address database, the module notifies the
other interconnected modules, which in turn add a corresponding remotely owned address
entry to their respective address databases. When a module purges a locally owned address
entry from its address database, the module notifies the other interconnected modules, which
15 in turn purge the corresponding remotely owned address entries from their respective address
databases. Each module may periodically send a keep-alive message including a list of active
addresses to the other interconnected modules, which maintain a persistence timer for each of
the remotely owned address entries and purge a particular remotely owned address entry if the
corresponding persistence timer expires before receiving a keep-alive message identifying the
20 remotely owned address entry as an active remotely owned address entry. Upon receiving a
keep-alive message, a module adds a remotely owned address entry for a particular address to
its address database if such a remotely owned address entry is not already maintained in the
address database. A module purges all remotely owned address entries from its address
database if the module is reconfigured to operate in a stand-alone mode. A module purges all
25 remotely owned address entries associated with a particular interconnected module if that
particular interconnected module is removed.